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# (12) UK Patent Application (19) GB (11) 2 364 026 (13) A

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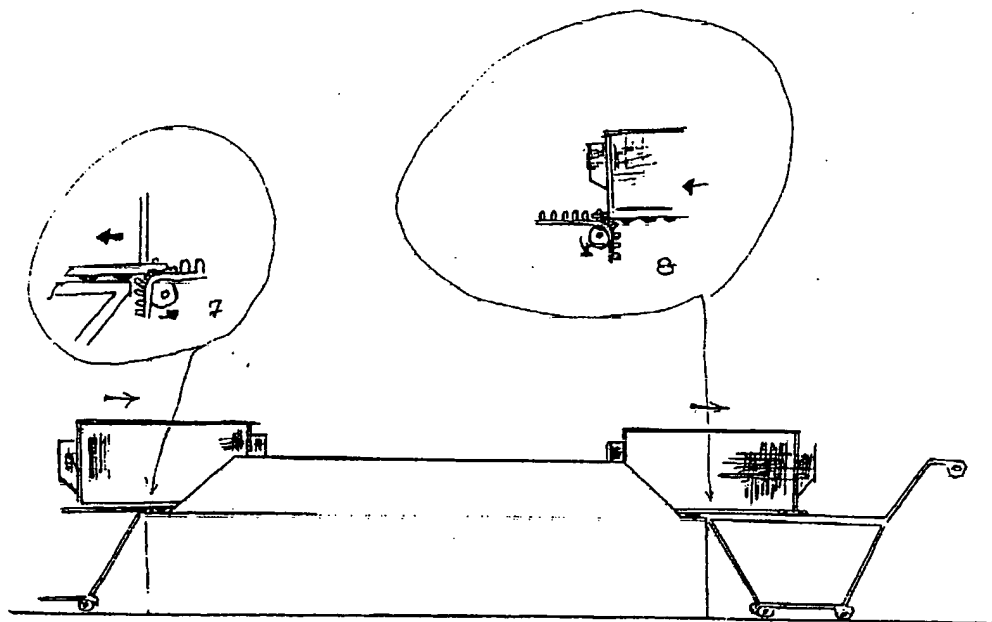
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B7B BTC BTX2

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GB 2234472 A GB 2110996 A  
DE 019643122 A1 DE 003231323 A  
FR 002573378 A FR 002569151 A  
US 6024527 A US 4097056 A

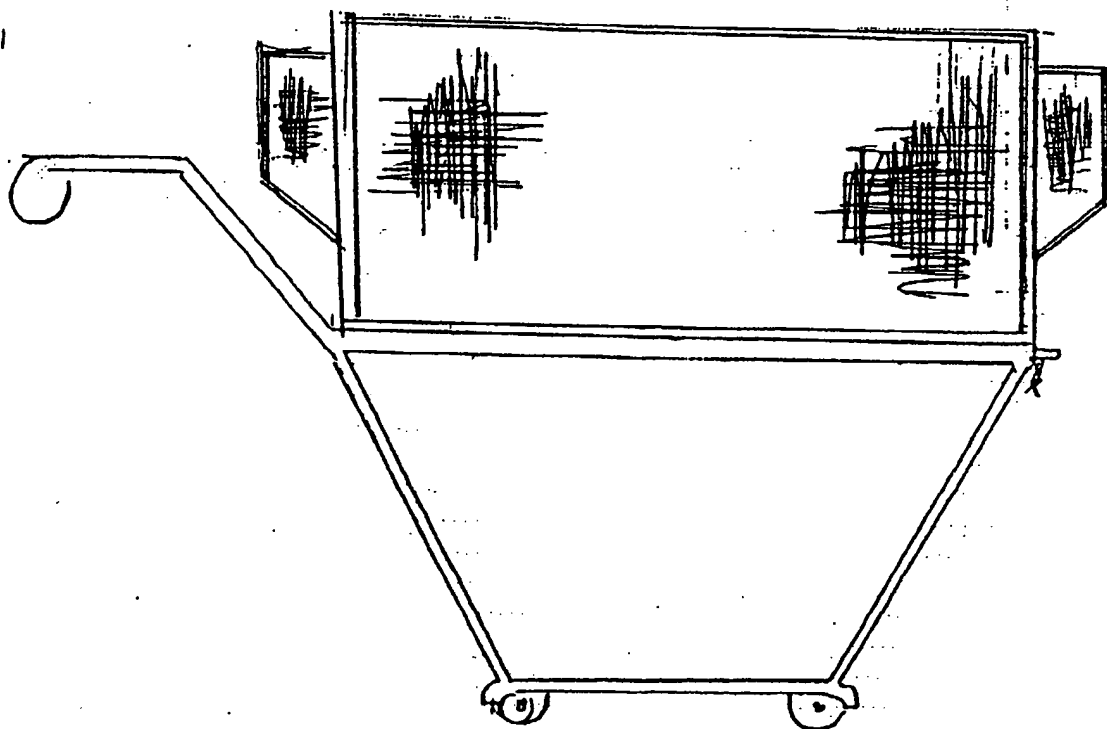
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(54) Abstract Title  
Shopping trolley with a detachable basket

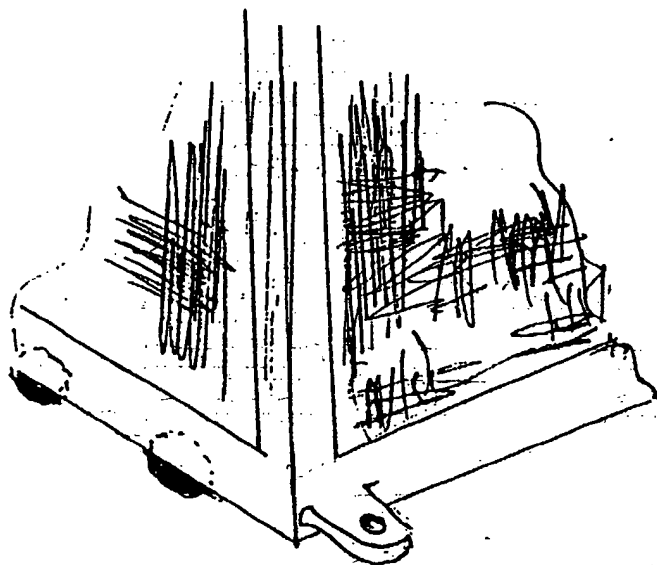
(57) A shopping trolley comprises a basket mounted on a wheeled frame the basket being separable from the wheeled frame. The basket may have means for engagement with a conveyance means provided on a check-out counter which enables said conveyance means to pull the basket from the wheeled frame onto the counter and to push the basket back onto the wheeled frame once the goods in the basket have been checked. The basket may have a ball rail provided on its underside to facilitate sliding movement of the basket. The trolley may be provided with a scanner and scales to price the goods as they are loaded into the trolley.



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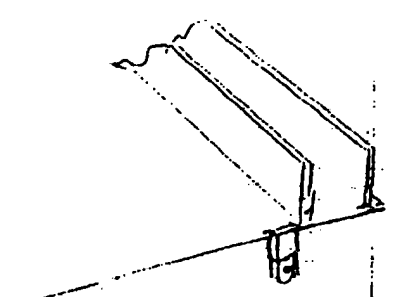
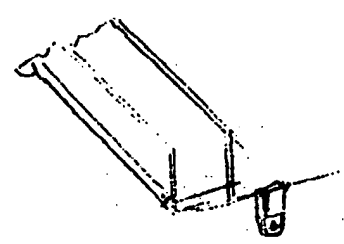
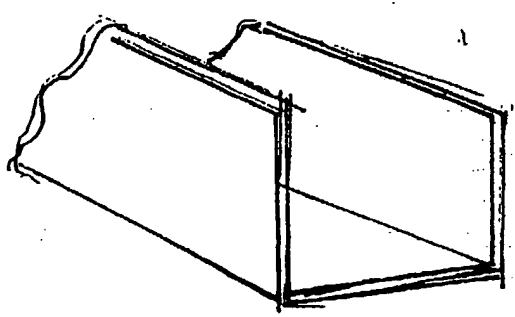
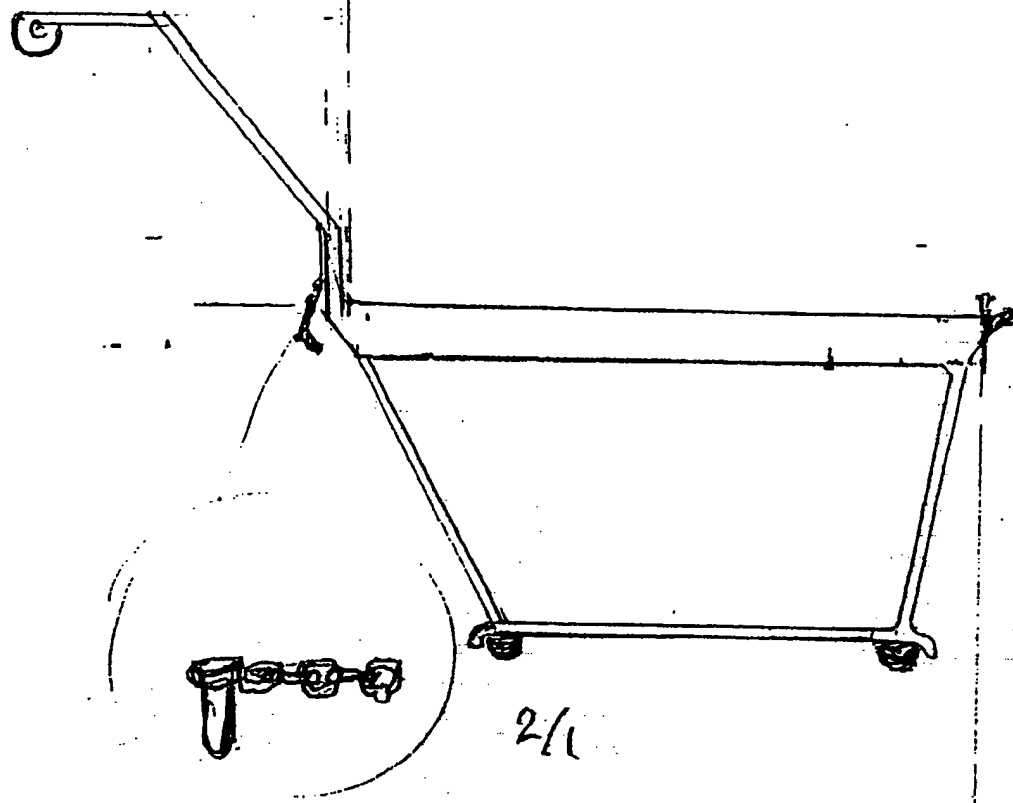


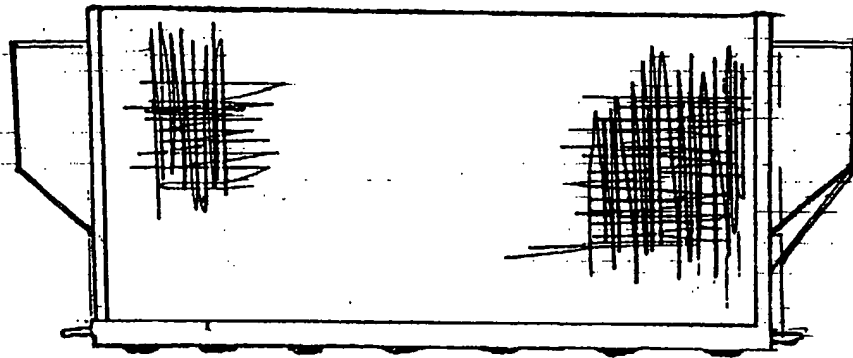
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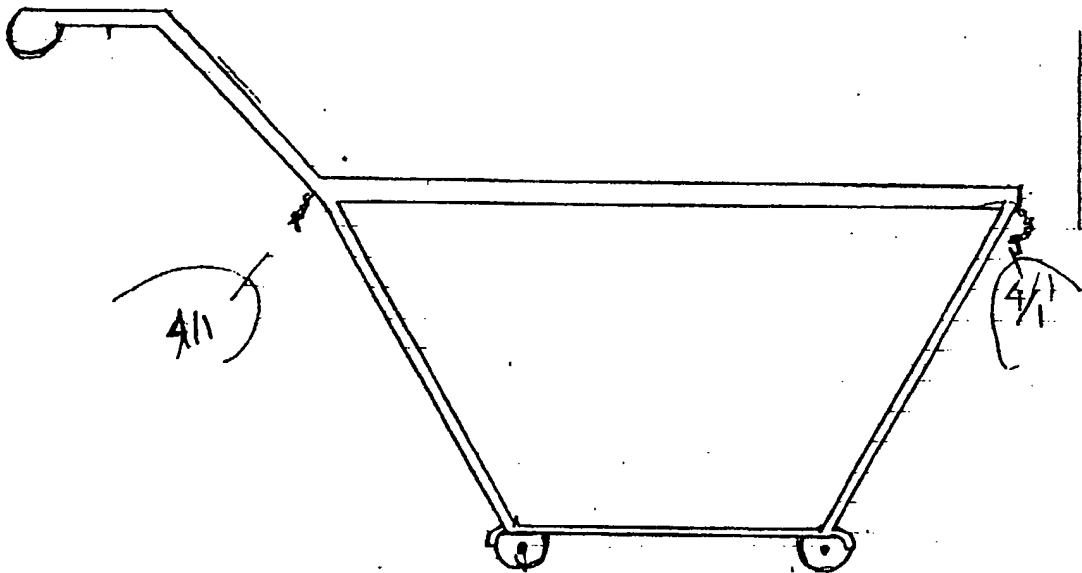
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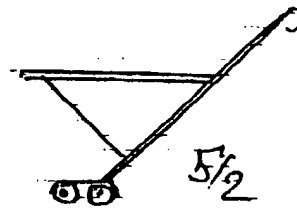


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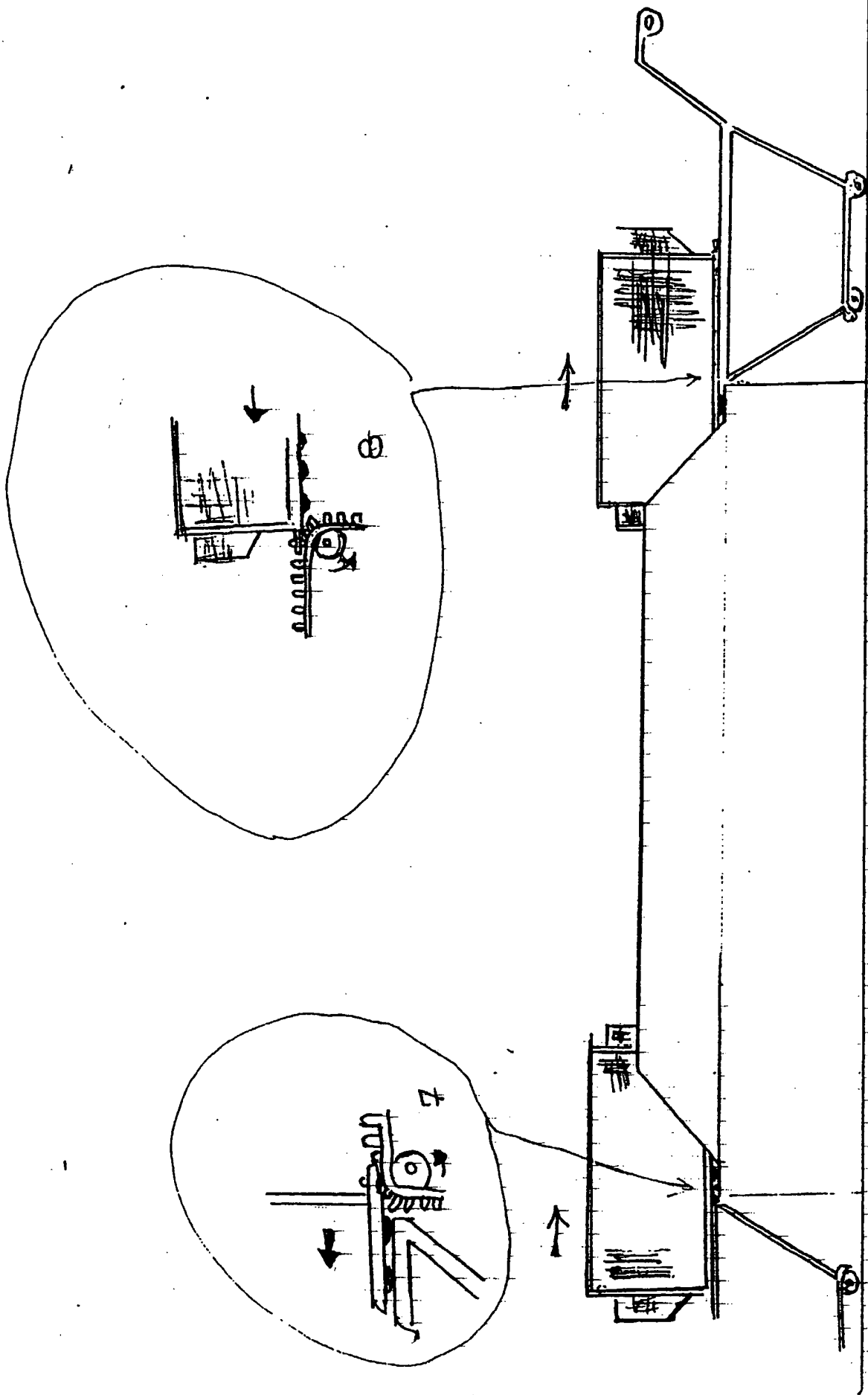
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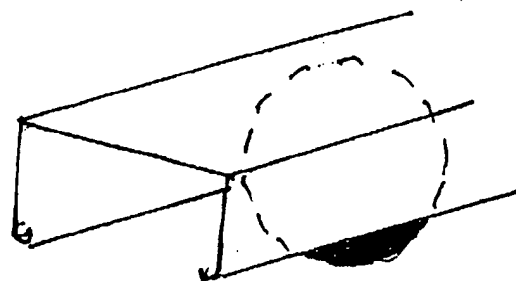
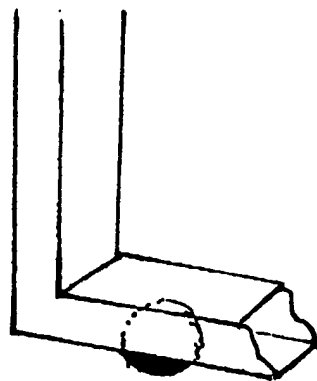
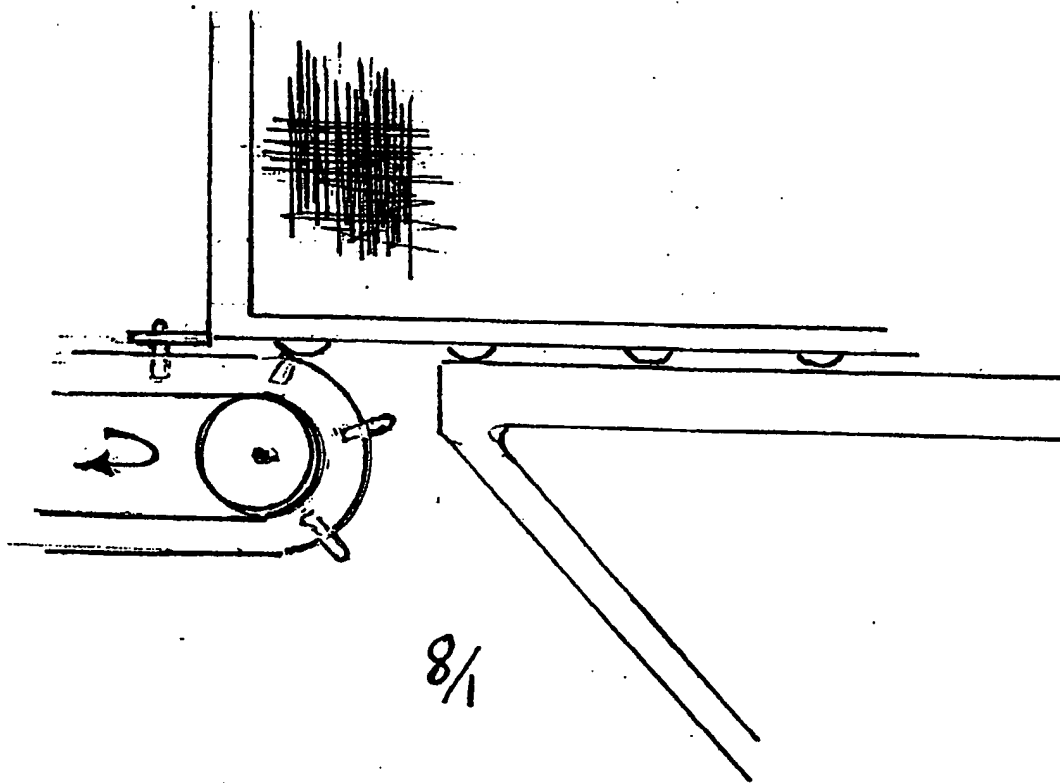
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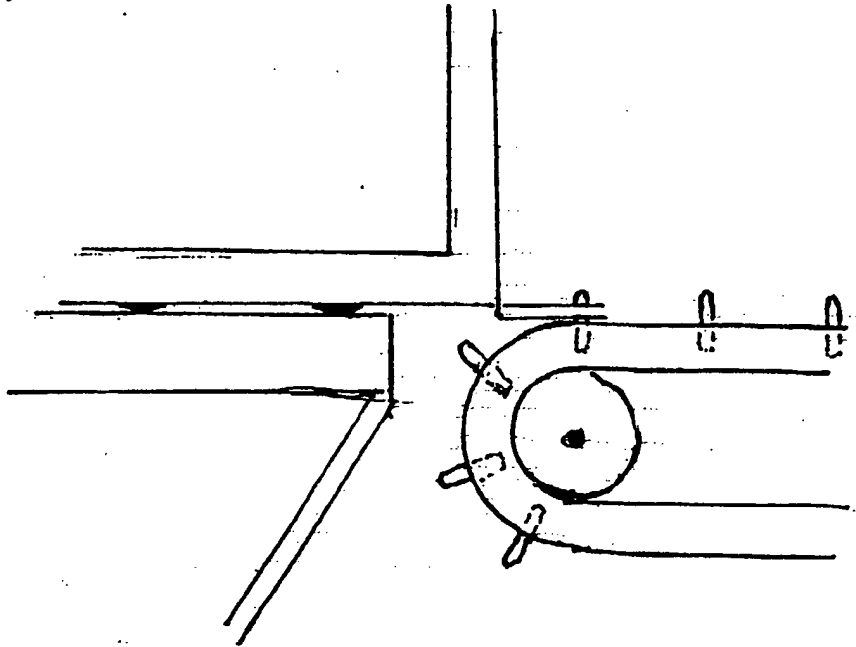
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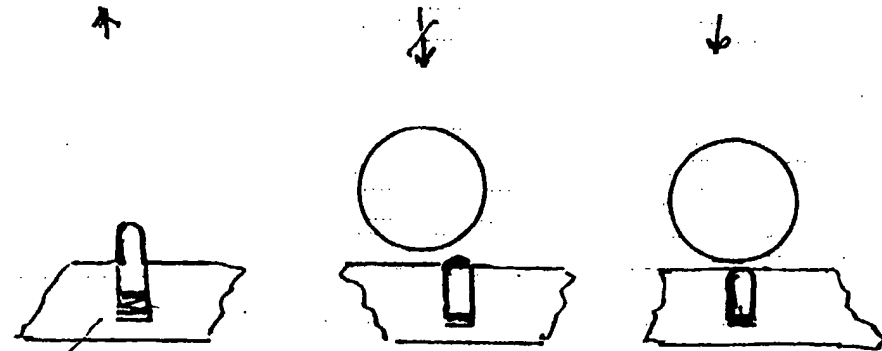
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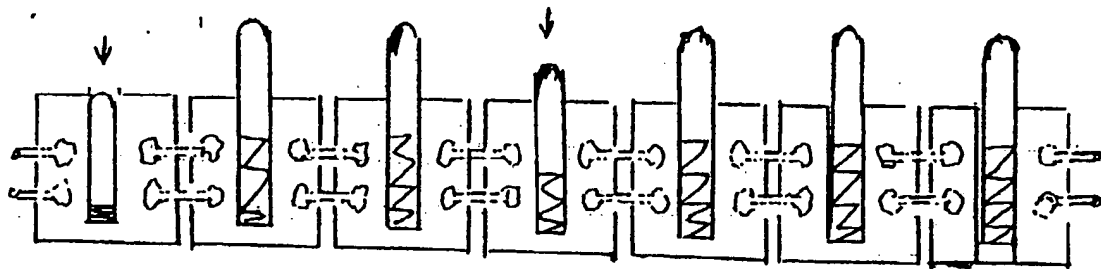
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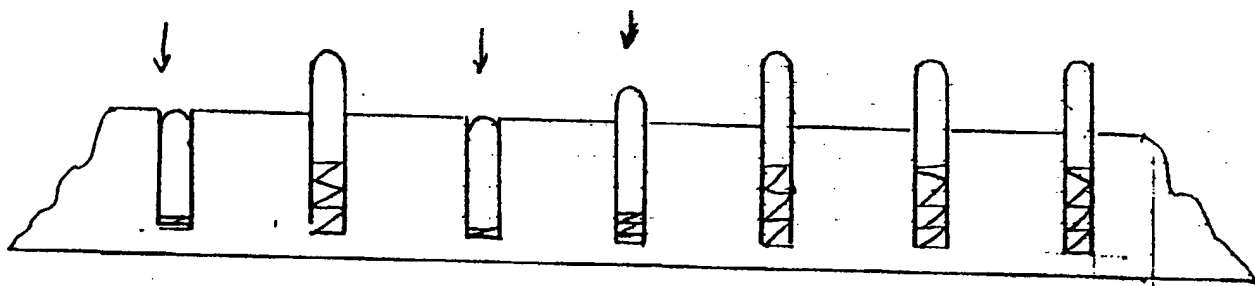
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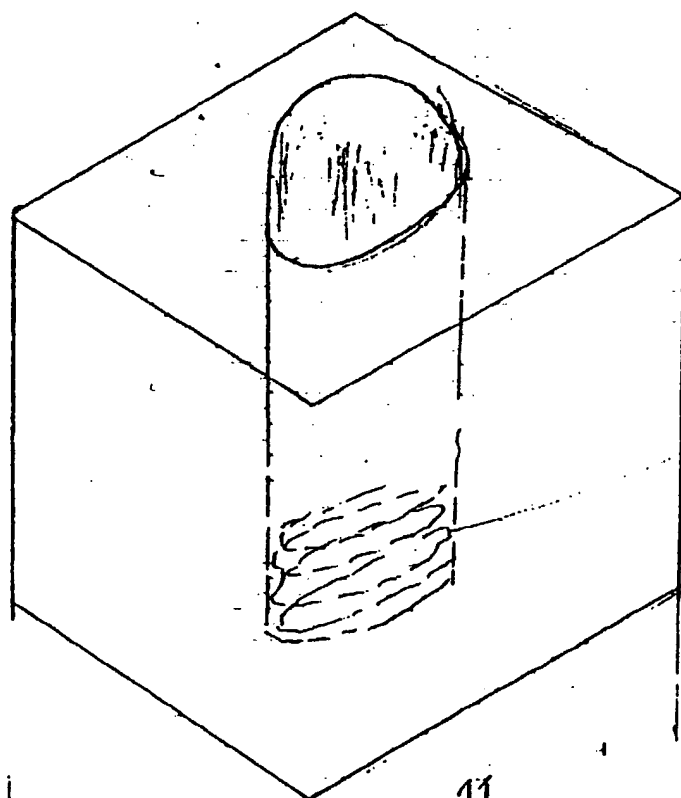




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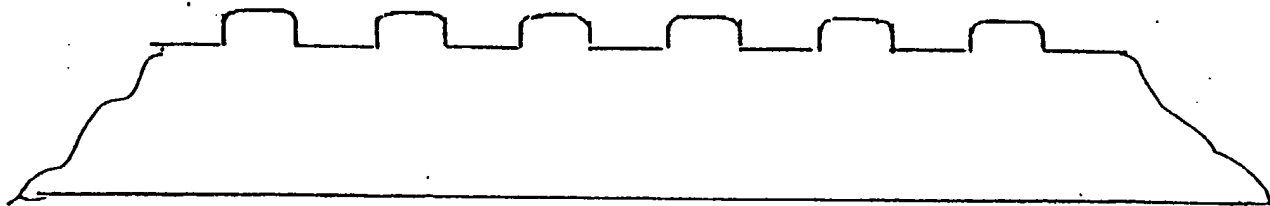


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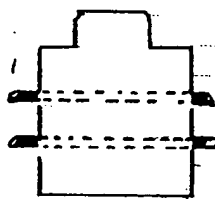


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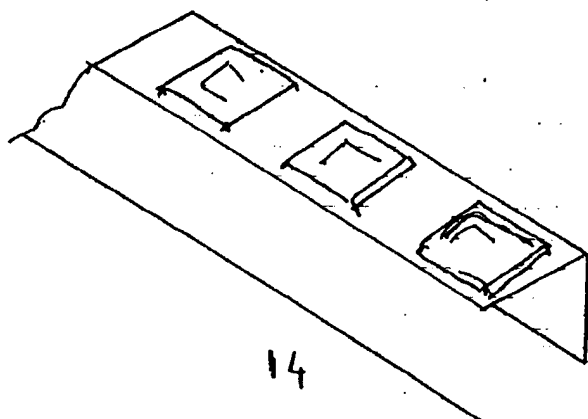
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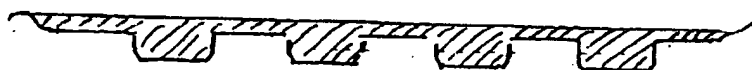
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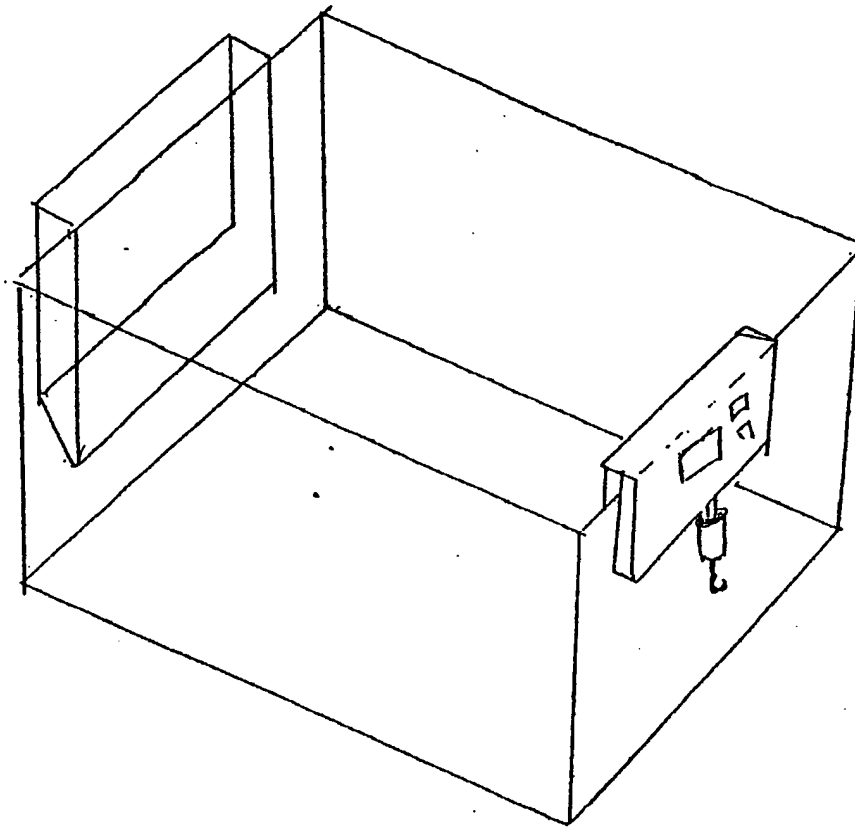
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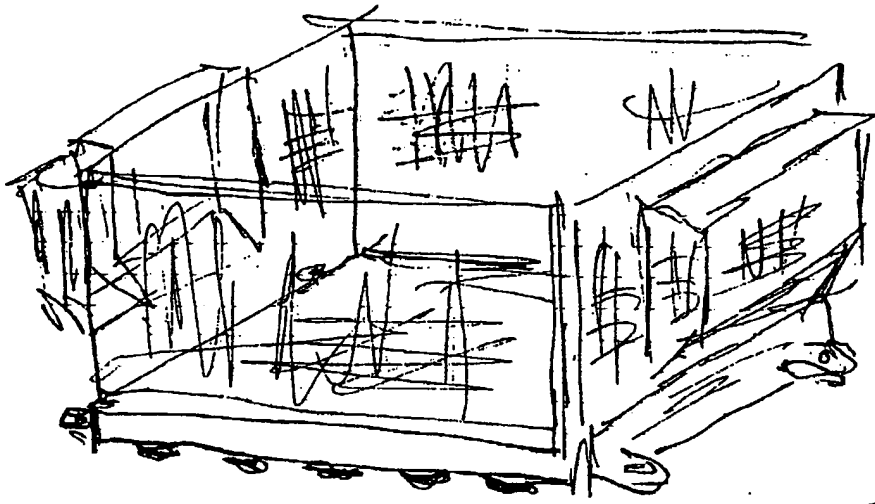


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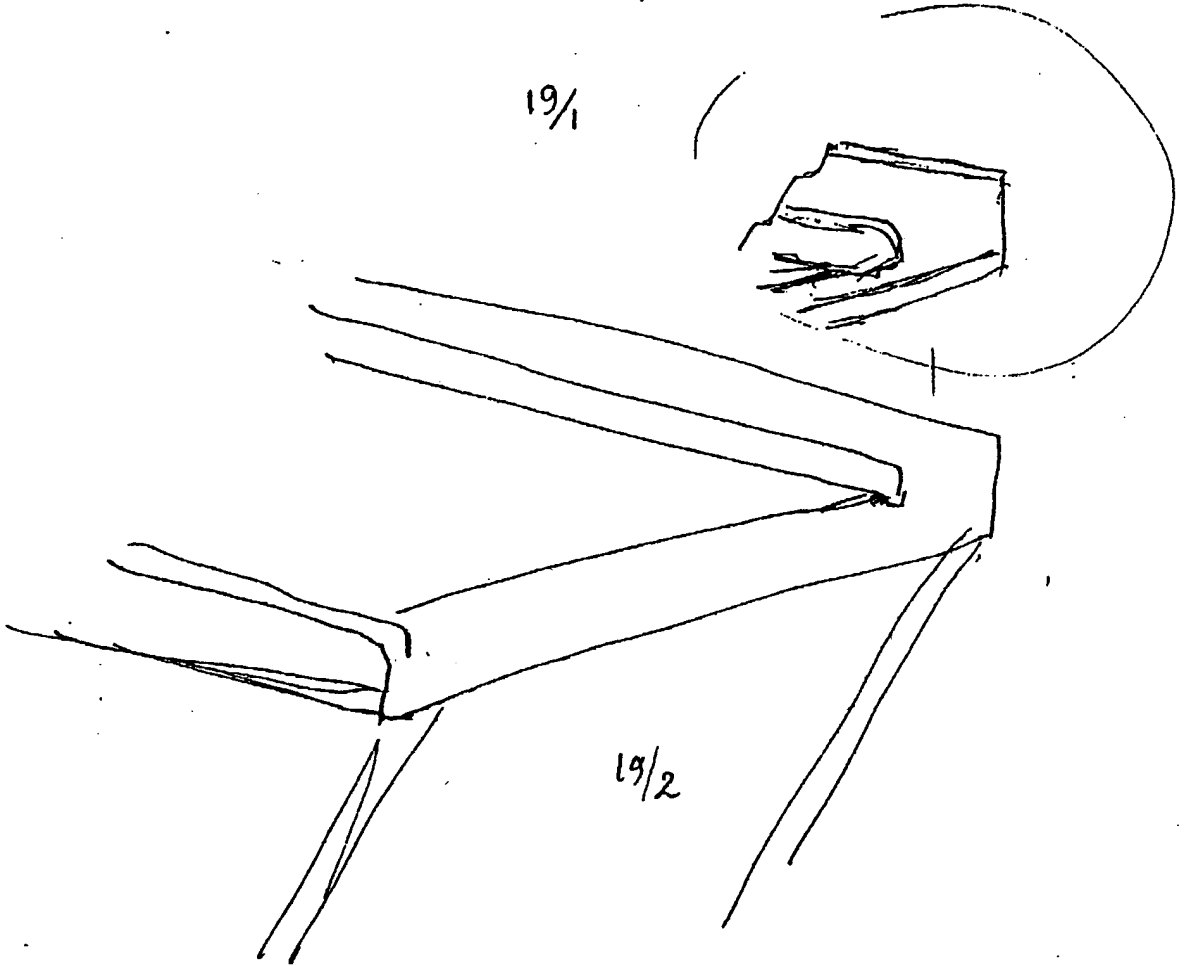


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PAGE(8) Nine

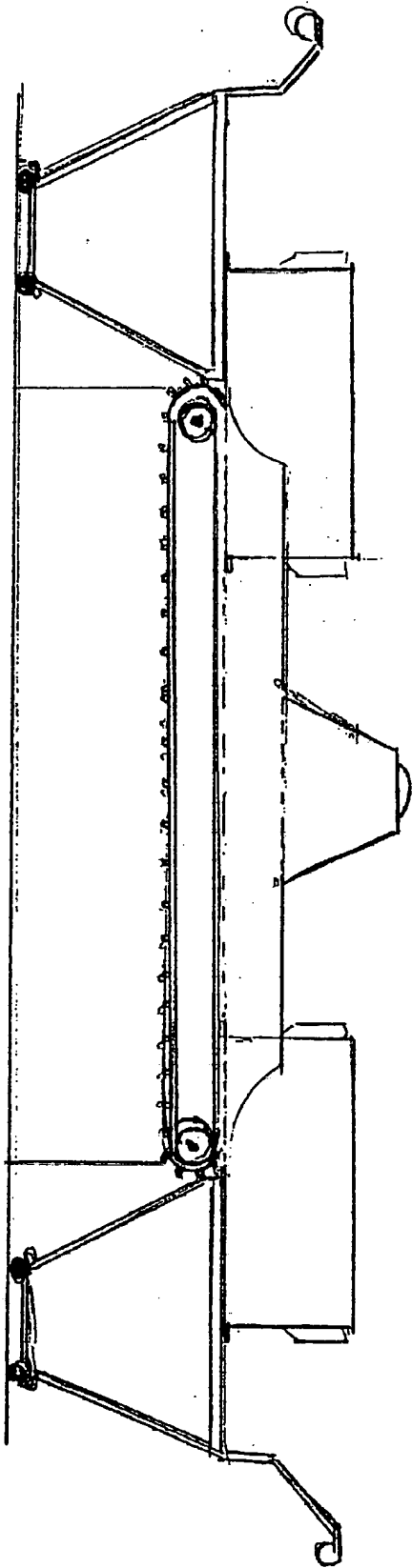


FIG 20

PAGE TEN (10)

# Easy T. Shopping & Push and pull Checking Desk.

Shopping trolleys came to our lives soon after the expansion of supermarkets at early seventies. Before that the cash and carries and whole sellers were using different types of trolleys (some of which are still being used). The idea of using trolleys were based on marketing and facilitating so shoppers could carry more shopping with comfort. However, as super markets are getting bigger and life in general is getting busier, the existing trolleys are not helping as they intended to do. Still the checking and paying is difficult and time consuming. The idea of shopping delivery and E shopping is not possible for some and not attractive for many others. Although shopping is fun for most and trappy for few. When it is done the rest ( checking, packaging and take them out of the shop) can be lengthy and painful. As the shopper when his/her turn arrived should took out one by one of one's shopping, place it on the checking table and again put them back in plastic bags in the trolley and off. Even if the super market has prepared stuff for packing the time and efforts one puts on the emptying one's shopping and for so, can be tiring and wasteful. The present invention has addressed the most painful part of shopping (waiting in the queue and checking out).

## Summery of invention:

According to the present invention, there is provided a separable trolley to allow the inspection of the shopping, number of them and their price be done without personal effort (lifting, straining, waiting).

The trolley has got two parts, Basket and the wheels. This two may separate to allow the basket to be dragged by different means such as a bullet chain or simple chain or any other possible means like Magnetic, over the checking desk. It may hold an small scanner devise to allow the shoppers to scan their shopping before putting them in the trolley. When the top part of the trolley is over the counter, the shop assistance may check and price the items as president with mobile or fixed scanners to scan the items and price them or simply read the trolley's basket scanner in the till to have the details prices and total them. Then he would pack if necessary and put them back in to the same basket. Then the basket may be pushed in the same manner to the waiting wheel and the customer. The wheel may be in any shape, with small engine ran by battery or any other means( cycling) or may be the normal one with handle to push. It may have small engraved holes in their side rails to allow the basket to roll/slid in and out if there is a wheel basket or latches to secure the basket when it is needed. The basket may have balls under the body to allow sliding and moving over the wheels. The incorporating check-in desk may have a bullet chain or ordinarily chains to pull the basket over the desk and may have a scanners ( it may be built in or separate) to scan shopping items or may have the exciting built in or free price- checkers.

### Brief description of the drawings

An embodiment of the present invention will now be described by way of example with reference to the accompanying drawings in which:

Figure 1 is the trolley with basket and wheels.

Figure 2 is the one side of the four tongs basket showing the tong with wheel which enable the bullet chain or prickly chain grab the basket and pull it over the counter (checking desk). The tongs are on both side of front and rear of the basket, that may enable the chains to draw the basket forward and push them to the far side of the other side with ease.

Figure 2/1 is the wheel and the security nub.

Figure 2/2 is the security nubs with hinges.

Figure 2/3 and 2/4 are the railing of the wheel's top.

Figure 3 is the basket when it is separated with small balls underneath 3/1. The balls running in the rail under the basket will ease the movements of the basket over the legs (wheels) or over the counter 3/1.

Figure 4 is the wheel when it is separated. 4/1 are the security latches.

Figure 5 is the different wheels with engine 5/1 and without one 5/2

Figure 6 is the checking desk. 6/1 is the basket being pulled in and 6/2 shows the basket being pushed out.

Figure 7 and 7/1 are the mechanism of pulling in by bullet chain.

Figure 8 and 8/1 are the mechanism of pushing out by bullet chain.

Figure 9 is the section of beady bullet chain. 7/2 is showing how bullets work under pressure.

Figure 10 is the section of normal bullet chain.

Figure 11 is the section of beady bullet chain.

Figure 12 is normal prickly chain.

Figure 13 is a section of beady prickly chain.

Figure 14 is the wheels rail which the basket base rest on them when the prickly chain are used.

Figure 15 shows the basket base for prickly chains. In this case a chain of small rolling balls both side of the holes will help the trolley to move 15/1.

Figure 16 shows the basket for bullet chain.

Figure 17 is the wheel base for trolleys when bullet chain are used.

Figure 18 is the top scanners desk.

Figure 19 is the trolley scanner with scale 19/1.

Figure 20 shows the assembly of trolley and checking desk.

Claims:

checkings

1- UN Easy Trolley & Push and Pull Desk comprises of :

a trolley with a free basket (3) and a wheel (4) which are separable therefore the basket could roll over the pull & push counter (6) and save the customer and staff time and efforts which otherwise would be wasted on emptying and filling the basket twice in order to check and price the shopping.

2-

the easy trolley according to the claim one can carry a scanner (19) to allow the customer to weight and price the shopping which could be stored in the scanners memory and be read later by the main scanner added up and produce the bill and delete the mobile scanners and make it ready for next reading.

3-

The easy trolley's basket has a ball railing at the bottom (3) (3/1) which enable it to roll over the trolley's base (4) and be secured by base latches (4/1) over the wheel (1) (2/1) (2/2).

4-

the wheel of easy trolley (4) could come of the different shapes or could move by different means (5/1) (5/2).

5-

the easy trolley's basket would have a device to make it possible for moving ahead out of the wheel or be moved back over the wheel (2), (7), (8).

6-

the easy trolley would need a push & pull counter (6) to co-operate with, this counter should have the means and devices to pull the basket sprats from the wheel (7) (7/1) and push back on the wheel (8) (8/1) using the control panel, chain or belt which would work like a rolling belt over the table (10), (11-11/1), (12), (13) (15-15/1) (20).



7-

the push and pull counter consist of a rolling belt which could pull the basket free from the wheel (6)(6/1)(7)(7/1) move that over the counter and push the basket out(6)(6/2)(8)(8/1)over the wheels.

8-

the pull and push counter may have keys to control the movement of the basket to reverse, halt and forward.

9-

the pull and push counter may have a top scanner to enable the till to read, recognise and price the items, give that information to main till and computer for further use.



INVESTOR IN PEOPLE

Application No: GB 0008467.3  
Claims searched: 1 to 5

Examiner: Richard Collins  
Date of search: 19 July 2000

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.R): B7B BTC, BTL2, BTX2.

Int Cl (Ed.7): B62B 3/02, 3/14, 3/18.

Other: Online EPODOC, JAPIO, WPI.

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2234472 A (GILL) abstract figure 1 and related description.	1
X	GB 2110996 A (LAMBOURN) page 2 lines 110 to 129.	1
X	US 6024527 A (SORIANO) see detachable basket 11 in figure 2.	1
X	US 4097056 A (CASTELLANO) figure 1 and column 1 lines 28 to 41.	1
X	FR 2573378 A (BOYER) figures and abstract.	1
X	FR 2569151 A (AVOT) figures and abstract.	1
X	DE 19643122 A1 (DEMIRLI) figures and abstract.	1,2
X	DE 3231323 A (DAHLERUSC) figures and abstract.	1

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